Miami Harbor, FL Navigation Study

Step 1 - Specify Problems & Opportunities

Step 2 - Inventory & Fore
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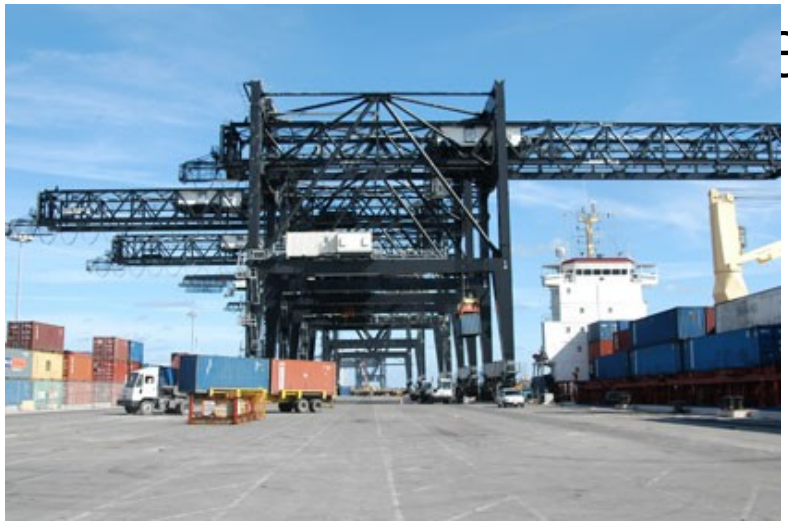
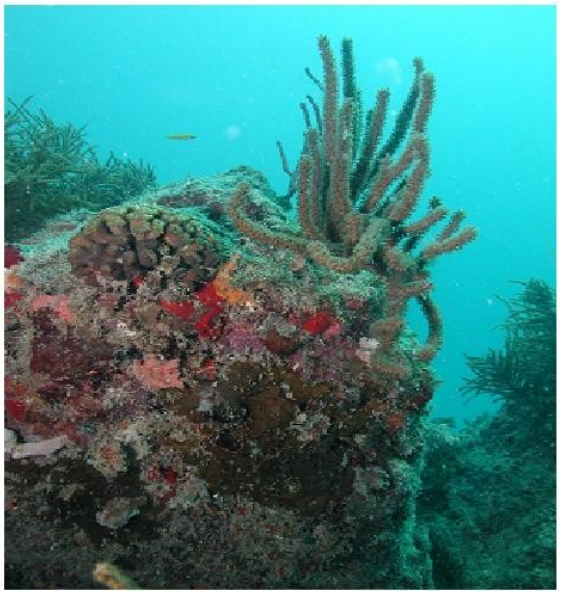


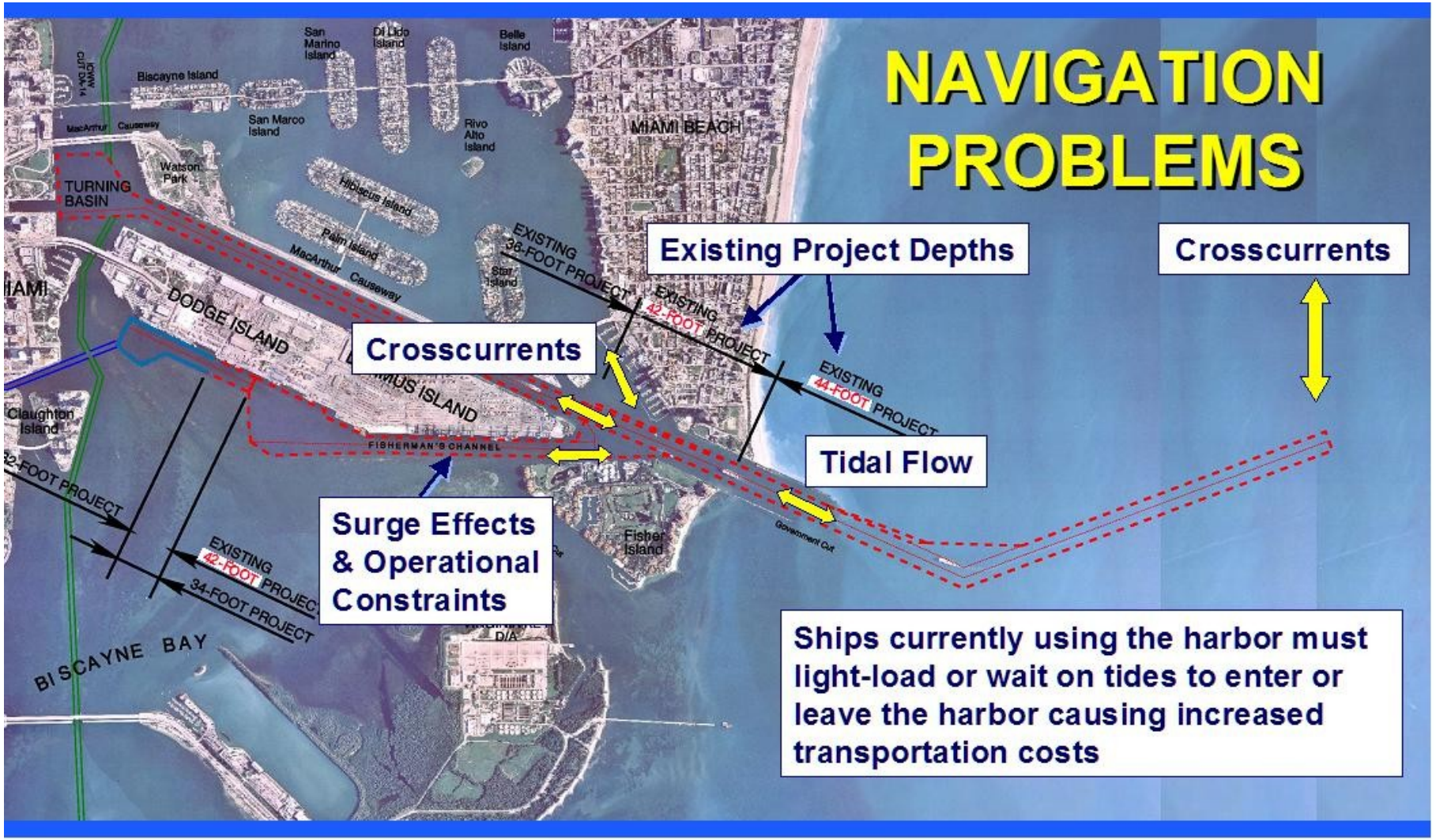


PROJECT LOCATION
Tallahassee
Jacksonville
St. Johns River
Gulf of Mexico
Tampa
Atlantic Ocean
Ft. Myers
Miami Harbor
Miami
N

San Marino Island
Di Lido Island
Belle Island
ICWW CUT DA-14
Biscayne Island
MacArthur Causeway
San Marco Island
Rivo Alto Island
MIAMI BEACH
Watson Park
TURNING BASIN
Hibiscus Island
Palm Island
MacArthur Causeway
Star Island
EXISTING 36-FOOT PROJECT
EXISTING 42-FOOT PROJECT
EXISTING 44-FOOT PROJECT
DODGE ISLAND
LUMMUS ISLAND
Claughton Island
FISHERMAN'S CHANNEL
42-FOOT PROJECT
EXISTING 42-FOOT PROJECT
34-FOOT PROJECT
Norris Cut
Fisher Island
Government Cut
VIRGINIA KEY D/A
BISCAYNE BAY
ATLANTIC OCEAN

Problems & Opportunities – Navigation

- Ships currently using the harbor must light-load or wait on tides to enter or leave the harbor causing increased transportation costs
  - Existing Project Depths
  - Tidal Flow
- Crosscurrents
- Surge Effects & Operational Constraints



Miami Harbor, Florida

Problems & Opportunities - Environmental Resources

- Seagrasses
- Hardbottoms and Reefs
- Threatened and Endangered Species
- Designated Critical Habitat (ESA)
- Non-ESA Protected Marine Mammals

SEAGRASS AREAS

Without-Project Conditions

Socio-Economic

Trend toward utilization of larger

container ships, larger cruise ships_

Continued economic growth/ business activity

Environmental: Aquatic, wetland & nesting habitat will continue to be lost/degraded due to dredging/disposal and development.

Without-Project Conditions (continued)

Navigation

- Increased commodity shipments
  2000 ~ 8 MT; 2059 ~ 122 MT
- Increased groundings
- Increased delays
- Major Assumptions
  - Panama Canal?
  - Projections for major commodities?

Major Commodity Projections

Containers, Ro-Ro, Lo-Lo

- Projection: 13 MT ~ 2009; 78MT ~ 2059;
- Actual: 8 MT ~ 2000; 9 MT ~ 2005

Cruise Passengers

- Projection: 4M ~ 2009; 11M ~ 2059;
- Actual: 3.3M ~ 2000; 3.6 MT ~ 2005

National Objectives

1. To improve the efficiency and safety of the deep draft navigation system.
2. To maintain or enhance the quality of the area’s coastal and estuarine resources.

Planning Objectives

1. Improve the level of navigation safety

2. Improve economic efficiency, and

3. Improve environmental conditions and minimize adverse environmental consequences.

Planning Constraints

- Structural
  - Fisher Island Development
- Environmental
  - Bill Sadowski Critical Wildlife Area (CWA)

Implementation Responsibilities

Navigation

- USACE - General navigation features
- USCG - Navigation aids
- Non-Federal - Local service facilities
- N-F Sponsor & Utility owners - Relocations

Environmental Resources

- USACE - dredging/disposal; beneficial use? ecosystem restoration?
- Non-Federal - development controls